Response to Comments on Tentative WDRs for Campbell Soup Supply Company, LLC

Comments were submitted by Campbells Soup Supply Company, LLC, on 18 April 2019

1. (Page #1, Sec. 3) APN for the main plant property is 0111-050-110, the parcel just to the north which is where the North and East wells are located, along with the septic leachfield and electrical substation is APN 0111-050-150. The Land Application Area APN's are 0111-050-050, 0111-100-040, 0111-100-110, 0111-100-120, and 0111-100-130. Sometimes the Solano County Assessor/Recorder office will leave off the leading and trailing zeros on these APNs (i.e. 0111- 050-110 = 111-050-11).
   Response: Correction was made.

2. (Page #4, Sec. 18) CPBOl and CPBlO are both sub-divided into four different fields (CPBOlA, CPBOlB, CPBOlC, CPBOlD, CPBlOA, CPBlOB, CPBlOC, CPBlOD), so the total number of fields is 29, not 23.
   Response: Correction was made.

3. (Page #4, Sec. 21) Typo: "The LAAs are cropped" instead of "The LAAs are copped".
   Response: Correction was made.

4. (Page #4, Sec. 21) See comment #2 above. There are 29 fields, not 23.
   Response: Correction was made.

5. (Page #5, Sec. 22) Typo: "The dry and wet solids" instead of "The dry and wets solids".
   Response: Correction was made.

6. (Page #5, Sec. 26) The table on Supplemental Irrigation Water Quality doesn't include the Boron levels (0.62 mg/L) that were shown in the table included as part of the Report of Waste Discharge. Since it is a constituent of concern, it might be worth including.
   Response: Boron was added to the table.

7. (Page #6 Sec. 28) Although we attempt to retain storm water run-off from the facility in Pond A, it has occasionally reached capacity, necessitating the discharge of storm water to the Land Application Area from the Lift Pit. If storm water is discharged to the Land Application Area during the off-season, it would not be retained on site. The drains that allow storm water to flow into the Dixon Resource Conservation District (RCD) drainage ditches are opened 3 weeks after the end of the processing season, after the site has been stabilized, or after the first 0.5" of rainfall has been collected and reapplied to the LAA (prescribed in the current WDR). The Dixon RCD ditches in the vicinity of the Campbell Soup facility and Land Application Area eventually drain to the Sacramento River delta. For this reason, it is our understanding that we need to continue to maintain coverage under General Order 2014-0057-DWQ, NPDES General Permit CASOOOOOl.
   Response: Text was corrected.

8. (Pages #7-9, Sec. 37-38) In the column of the tables "Concentration Protective of Beneficial Use" there are levels listed that reference many different MCLs or Water Quality Goals (see reference below). Our discharges for EC since the RO units were installed in August of 2011 average out to 638 µmhos/cm, with the highest single detection at 870 µmhos/cm. This average is well below the Secondary Maximum Contaminant Level of 900 µmhos/cm. The levels measured in the downgradient monitoring wells are consistently above the Secondary MCL, most likely due to legacy salts from operation of the ion-exchange water softeners prior to August of 2011. Boron levels in the discharge over that same time period average out to 0.54 mg/L, which is

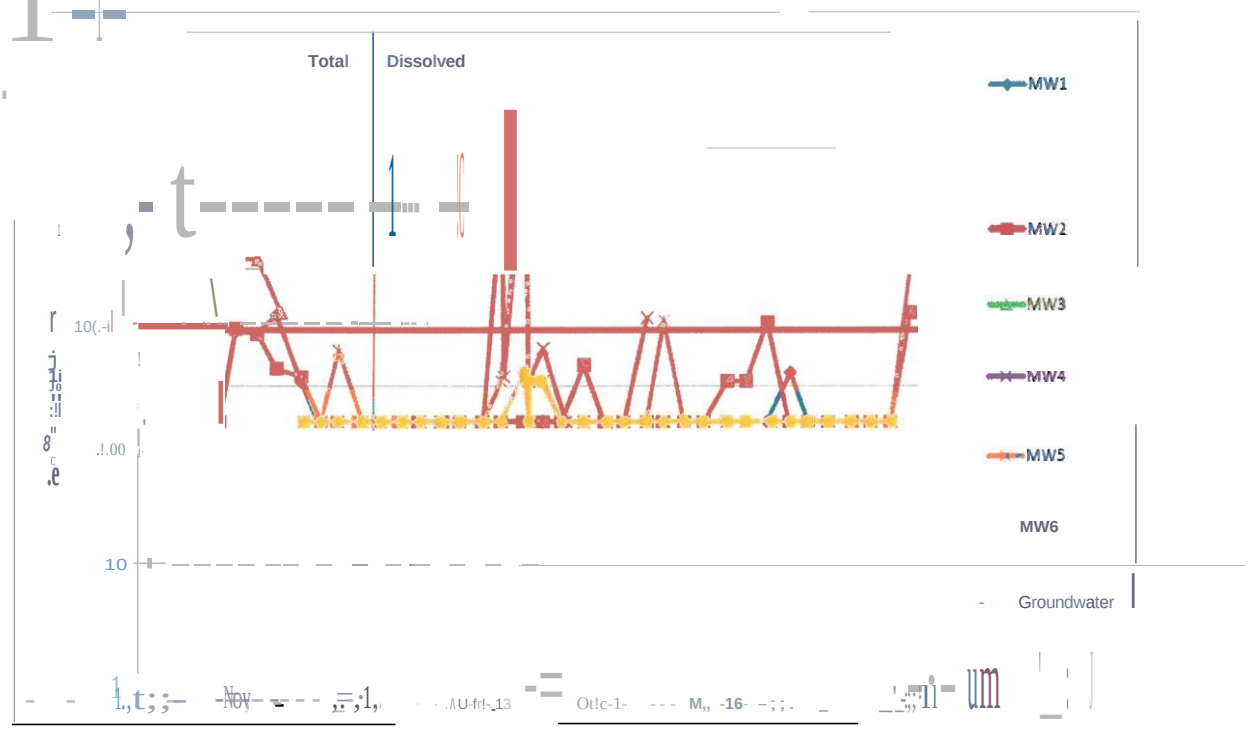
below the lowest agricultural water quality goal of 0.7 mg/L. Downgradient monitoring wells #4 and #1 are consistently above the 0.7 mg/L, while #2 occasionally exceeds that level (although with less frequency in recent years). The Boron concentrations in source water average 0.55 mg/L, so tomato processing doesn't seem to contribute to the levels of Boron in the wastewater. Our concern, in both of these cases, is that we may violate groundwater limitations due to legacy conditions or conditions that don't seem to be tied to the levels of constituents in our recent wastewater discharges.

1 **Secondary Maximum Contaminant Level**
2 **Primary Maximum Contaminant Level**
3 **SecondaryMaximum Contaminant Upper** Level
4 **Lowest agricultural water quality goal**
5 **Secondary Maximum Contaminant Recommended Level**

Response: Issue was discussed during a conference call on 16 April 2019 with the Discharger. No changes were made based on the discussions.

9. (Page #12 Sec. 60} " ensure the even application of wastewater over the available land application area" is probably not achievable in practice, but reasonably even application is.
Response: Text was modified as described in the comment.

10. (Page #13 Sec. 64) Look at methodology behind the average concentrations in the table. The iron and manganese average levels obscure the fact that the measurements are a mix of many " no detects" and some moderate to extremely high spikes. These occur in both upgradient and downgradient wells and have tended to take place during times when no wastewater application is taking place on the property (December and M arch). Boron is also not included in the table as a constituent of concern, even though it is monitored and regulated as one.
Response: Issue was discussed during a conference call with the Discharger on 16 April 2019. No changes were made based on the discussion.

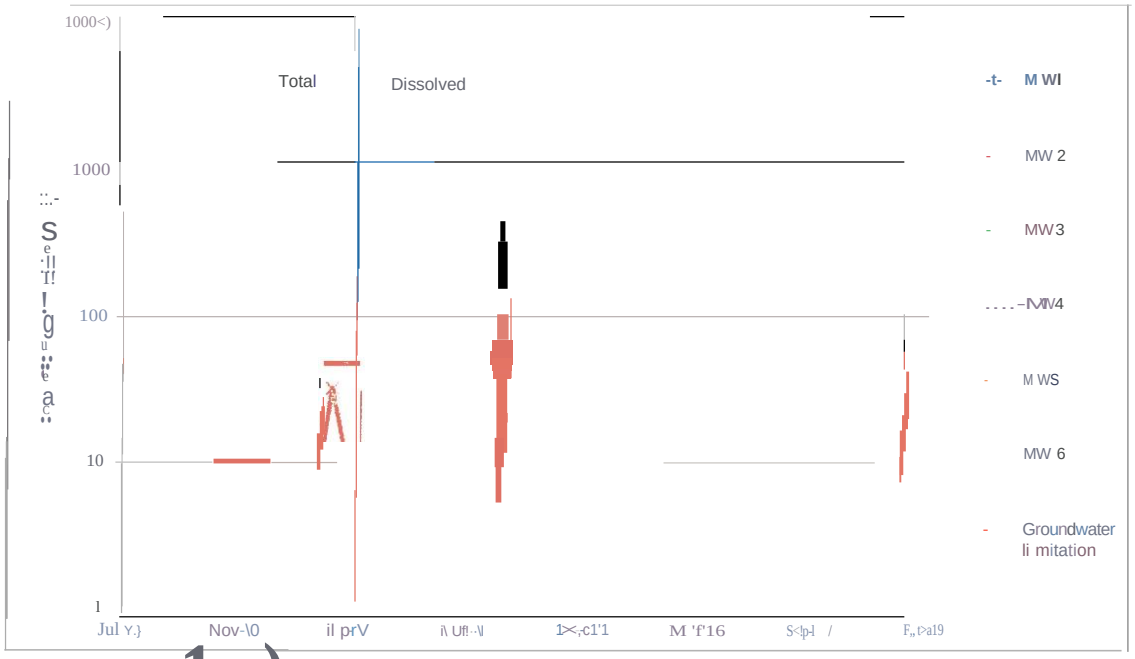


Dixon, CA

Figure

12

Prepared by: CM | Checked by: DK | Date: 12/13/18



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13 Pedrick Road
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Figure

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11. (Page #15 Sec. b. Nitrate) Concentrations of nitrate in the downgradient wells MW1 and MW4 are typically much lower than the upgradient wells rather than being "equivalent", although upgradient well MW5 is highly variable in nitrate levels measured. Downgradient well MW2 does have equivalent levels of nitrate as upgradient wells. The location of MW2 on the southern border of the LAA and the groundwater flow direction (from west to east), may allow practices used on agricultural land to the south and southwest to influence the nitrate levels measured, rather than only measure the impact of wastewater discharges from the plant. **Response**: Text was clarified.

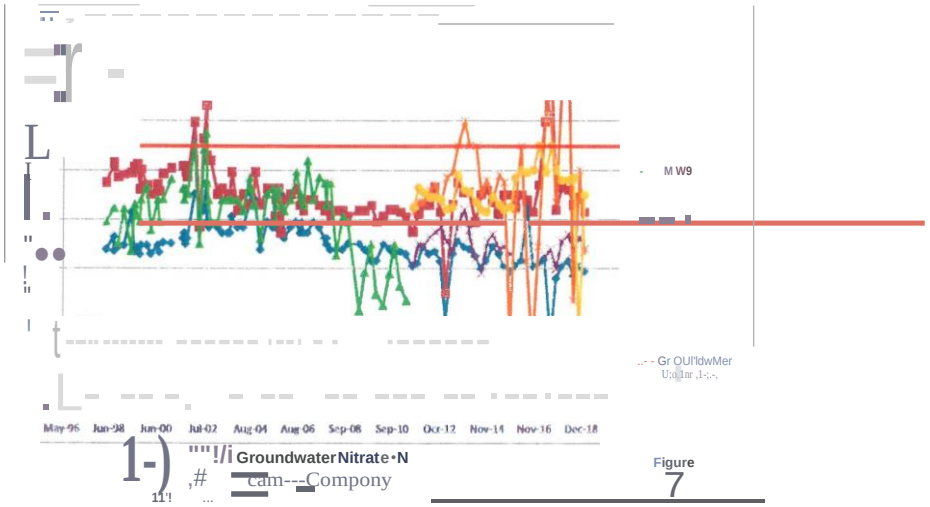

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Figure 7

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12. (Page #15 Sec. c. Sodium and Chloride) Typo: "degradation groundwater" should be "degradation of groundwater".
Response: Text was corrected.

13. (Page #15 Sec. d. Iron) The use of average iron levels in groundwater obscures the fact that most measurements of iron show non-detects, with a few spikes that greatly impact the average levels. The statement "concentrations in upgradient wells are less than downgradient wells and are less than the concentrations protective of beneficial use" is not accurate. The table below shows every detection of dissolved iron above the laboratory detection limit since the 3rd quarter of 2011 (results shown in µg/L). Some of the detections are repeat samples which followed shortly after detections of extremely high spikes. Those repeat samples were typically much lower than the initial detection. Although some detections of high iron levels have occurred during time periods when wastewater discharges were taking place (July-October), the highest levels observed, and the majority of the detections occurred in December and March. This seems to point to a cause that is not related to the wastewater discharges from the facility. We are concerned that spikes in iron in groundwater that is not related to our wastewater discharge will end up putting us out of compliance with the WDR. There are agricultural drainage ditches that run through and around the land application property that may be contributing to some of these detections (a map showing the route of these ditches is included at the end of these comments). The manganese detections are also summarized over the same time period (results shown in µg/L). Levels above the laboratory detection limits have only been observed in downgradient MW4 and upgradient MW5. If anoxic or reducing conditions were being caused in the soil solely due to the wastewater discharge, you would expect to see manganese detections in MW1 and MW2 as well, and not at all in MW5 and MW6, but this isn't the case.
Response: This issue was discussed during a conference call with the Discharger on 16 April 2019. No changes were made based on the discussion.

Iron Detections

MW1		MW2		MW4		MWS		MW6	
612112011	130	12/9/2014	150	12/5/2013	**4,900**	12/13/2011	200	3/19/2014	130
		9/19/2016	110	12/17/2013	120	12/5/2013	110	4/7/2014	110
		12/6/2016	110	3/19/2014	**15,000**	3/19/2014	**19,000**		
		3/8/2017	**350**	4/7/2014	110	4/7/2014	110		
		12/4/2018	**420**	6/10/2014	210	12/1/2015	**360**		
		3/18/2019	240	9/17/2015	**380**	12/4/2018	**1,100**		

Manganese Detections

MW4		MWS	
12/5/2013	**110**	12/13/2011	34
3/19/2014	**280**	3/19/2014	**440**
9/17/2015	19	12/1/2015	16
		12/4/2018	**88**
		3/18/2019	**180**

14. (Page #17 Sec. 72) Same comment as comment #7 about NPDES permit coverage.
Response: Text was corrected.

15. (Page #19 Sec. B. Flow Limitations) Does the total annual flow of 490 MG only apply to wastewater, or do other flows, like stormwater discharges and supplemental irrigation water, also count toward the total?
Response: The total flow of wastewater discharged to the LAAs include any other source of water when commingled with wastewater. Once it's commingled, it is all considered wastewater. Flow monitoring is only required when wastewater is discharged to the LAAs.

16. (Page #20 Sec. C. Effluent and Mass Loading Limitations) Is the FDS flow weighted discharge going to require FDS testing of discharges that consist just of stormwater or supplemental irrigation water in the non-production season? If so, what is the testing frequency for periodic discharges? Is the Total Nitrogen Crop Demand specified anywhere in the WDR or is incumbent upon us to provide that information based on what crop is being grown (irrigated pasture)?
Response: FDS effluent limit is based on samples collected when wastewater is applied to the LAAs. When wastewater is applied, the sampling frequency is monthly. Storm water or irrigation water not commingled with wastewater are not required to be sampled under these WDRs. It is the Discharger's responsibility to determine total crop demand based on crop type.

17. (Page #20-21 Sec. D. Discharge Limitations Part 5, 8, & 9) We'd like to clarify what the 100-year flood contingency applies to. Our stormwater pond is meant to allow collection of stormwater runoff from the processing plant property for percolation and evaporation, but it is not designed to necessarily capture the entire volume from extremely large and sustained storm systems. We still require discharge of stormwater during these periods, and maintain a NPDES permit for this purpose. The capacity of the land application area is sufficient for wastewater discharges and the occasional rains that tend to occur toward the end of the tomato processing season, but they are not designed to impound all off-season rainfall. This is why we are a part of a Water Quality Coalition through the Dixon Resource Conservation District to allow for off- season discharges of stormwater from the land application property.
Response: Discharger Limitations 5, 8, and 9 pertain to wastewater.

18. (Page #21Sec. 13) Confirm that "residual solids" specifically refer to "organic food processing byproducts such as culls, pulp, stems, leaves, and seeds that will not be subject to treatment prior to disposal or land application (Page #23 Part G.3)". Why is diatomaceous earth mentioned? We don't have any of that present on the site.
Response: The reference to diatomaceous earth was removed and residual solids were defined as shown on the comment.

19. (Page #22 Part E.) The "Groundwater Limitations" section is a little confusing. Would it be possible to go into greater detail and more explicitly explain what the groundwater limitations will be for each constituent of concern and each well? The goal would be to avoid any subjective interpretation or confusion about the limits. There are different secondary maximum contaminant levels (upper and lower) that might be implied for different constituents. Our understanding currently is that we are to develop statistical methods as part of the "Groundwater Limitations Compliance Assessment Plan", which is due 1 January 2020, which will use intrawell evaluations to ensure that our discharge is not contributing to further degradation of groundwater quality for those wells where current groundwater quality already exceeds a limit for certain constituents. For those wells with constituents below the concentrations protective of beneficial use, we would need to ensure that our discharge does not cause them to rise above that

concentration. If the statistical methods indicate this was occurring, we would then need to submit a "technical evaluation of the reason for the exceedance and a discussion on possible mitigation measures that could be taken, if needed. The evaluation shall also include a discussion of changes in upgradient conditions to determine if exceedances are the result of changing upgradient conditions which are likely out of the Discharger's control." If this is an accurate interpretation, please confirm.

Response: No changes were made based on this comment. Detailed explanations and clarification were discussed during a conference call with the Discharger on 16 April 2019.

20. Page #23 Sec. 7) New setback distances would require big changes in operation and infrastructure on the LAA. Old setbacks are on page 27 of previous WDR and MRP. We understand that there may be some flexibility on these setbacks to "grandfather" existing infrastructure if it does not pose a risk to allow wastewater to escape the property boundaries or threaten wells or surface water courses. Below are shown the setback distances for the current WDR and the tentative WDR.
Response: A statement was added to the WDRs to explain that this is an existing facility, and while some site features may not comply with the setbacks, the discharge is still permitted.

Current WDR

7. The application of wastewater to the LAA shall comply with the following setback requirements:

Setback Definition[1]	Minimum Irrigation Setback (feet)
Edge of land application area [2] to public property boundary (e.g. street)	5 [3]
Edge of land application area [2] to other agriculture property	0
Edge of land application area [2] to property with an occupied residence	50
Edge of land application area [2] to an irrigation well	25 [3]
Edge of land application area [2] to domestic well	100 [3]

[1] Additional setbacks may be needed to comply with other requirements of this Order.
[2] As defined by the wetted area produced during irrigation
[3] Unless otherwise approved by the Executive Officer.

Tentative WDR

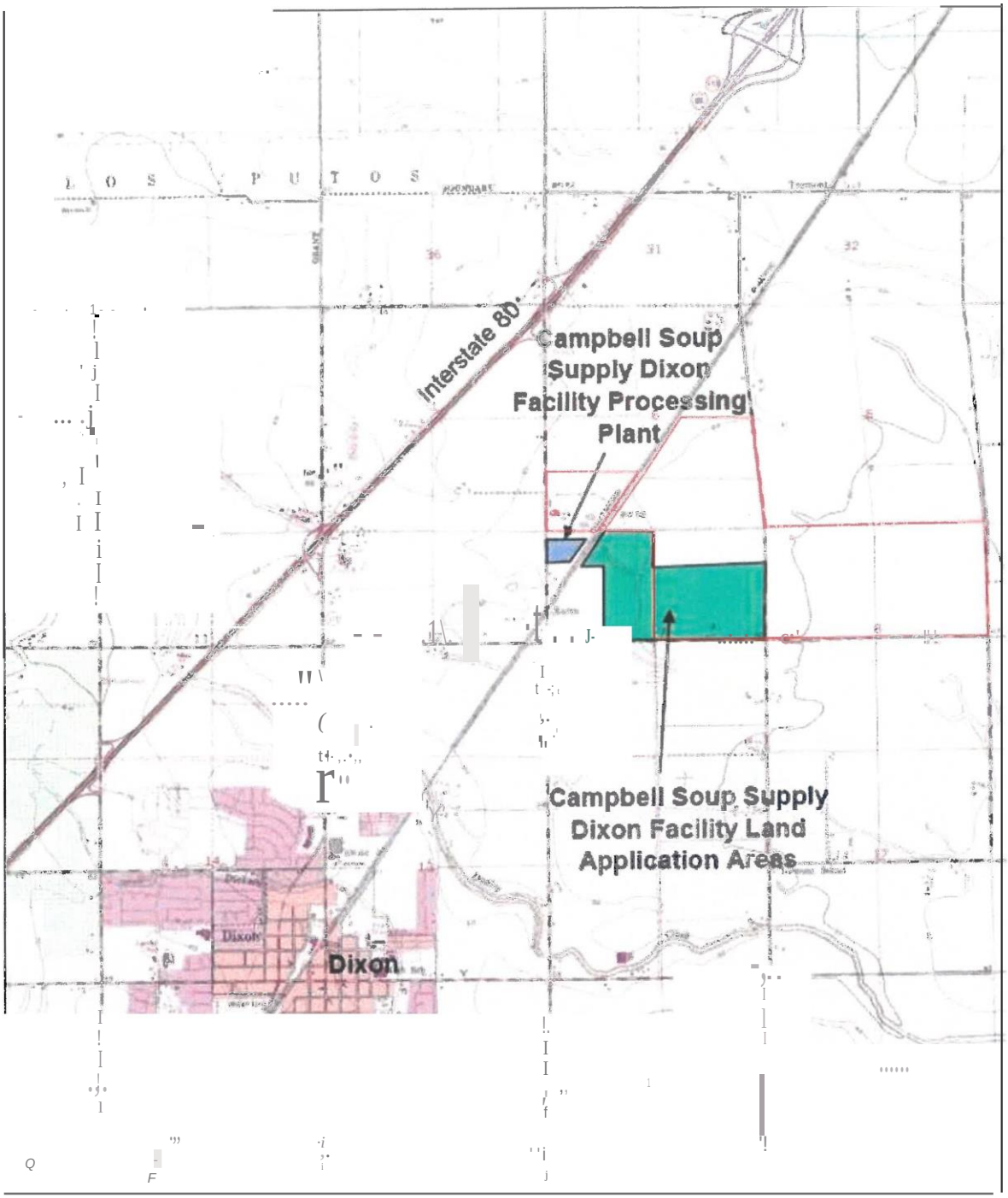
7. LAAs shall be designed, maintained, and operated to comply with the following setback requirements:

Setback Definition	**Minimum Irrigation Setback (feet)**
Edge of LAA to property boundary	25
Edge of LAA to manmade or natural surface water drainage course	25
Edge of LAA to domestic water supply well	100

21. (Page #23 Sec. 8) What does the reference to "recycled water use" pertain to?
Response: Text was clarified.

22. (Page #26 Sec. 13) What is the intent of this section referring to "pollution-free wastewater" in the wastewater system?
Response: This requirement was deleted from the WDRs.

23. (Attachment A) The outlines of the facility and land application areas on the site map are not correct. The correct boundaries are shown in red on the diagram below.
Response: Attachment A was corrected.



24. (Attachment B) The location of the East Well is right above the word "East", not in the

location indicated. The South Well is just to the right of the tree, that is to the right of where the diagram currently indicates its location.
Response: Corrections were made to Attachment B.

25. (Attachment C) MW5 is on the west side of the railroad tracks, and just slightly south of where it is indicated currently. The MW5 marker is actually where SW1 is located.
Response: Corrections have been made.

26. (Attachment D) Not all of the supply water is run through the Reverse Osmosis (RO) units. Only about 10-11% of the supply water (-320,000 gal/day) is sent to the RO units. One third of that total ends up as reject water with the concentrated minerals, and the other two thirds is used for the pump seal water system and boiler make-up water.
Response: A footnote was added to the figure for clarification. Text in WDRs was also corrected.

27. (MRP Page #3 Footnote 3 from the Wastewater Effluent Monitoring table) Should the .45 micron filter for dissolved iron and manganese testing be used on the wastewater collected in the composite sample? Is this to be done at the lab or at the facility?
Response: Laboratory. The MRP was clarified.

28. (MRP Page #4 Sec. A) Is all the information in items 1-7 expected to be included for each field irrigated on a particular day, or are we to note only problems? This could end up being an enormous amount of information to collect and convey. What specific elements of ditch or berm condition are you interested in knowing? Should irrigation events using only supplementary irrigation water follow the same inspection guidelines, or are you primarily concerned with irrigation using wastewater?
Response: Inspections are required once a week for which ever field is being irrigated on the day of inspection. A simple check list is sufficient, such as noting “no issues”. For the berms and ditches, we are looking for such things as holes in the berms, animal burrows, excessive vegetation, crushed or damaged berms, standing or stagnant water in ditches, etc.

29. (MRP Page #4 Sec. B) The requirements to calculate hydraulic loading rate, BOD_5 loading rate, total Nitrogen loading, and flow-weighted FDS concentration on such a granular scale (there are 827 individual checks) will be extremely difficult, expensive, and require so many assumptions, that the data is not likely to be much more accurate than the current system of reporting which fields are being irrigated and calculating loading from that. The requirements listed seem to be much more rigorous than other tomato processing facilities that have had their WDRs reviewed within the last several years (PCP, Ingomar, Olam, Liberty Packing, Morningstar). We would like to have a conversation that describes the practices used to see if there is a more efficient method to obtain the data that is being sought.
Response: The method used to calculate BOD loading rates is the same as what has been done previously. The formula for BOD calculations in the MRP was modified to show daily average instead of cycle average.

30. (MRP Page #6 Sec. C) What is the reason that some downgradient monitoring wells are evaluated against "Current Groundwater Quality" while others use a specific "Groundwater Limitation"? We don't really have an issue with this approach, just want to understand the reasons behind it.
Response: This was discussed in detail with the Discharger during a conference call on 16 April 2019; no changes were made to the WDRs based on the discussions.

31. (MRP Page #7) In the table for "Groundwater Limitations" the Chloride line doesn't specify which compliance wells the 250 mg/L limit applies to. We assume MW1, MW2, and MW4, but please specify.
Response: Table was corrected.

32. (MRP Page #7) Typo: remove "the" in sentence starting "If the it is determined..."
Response: Correction was made.

33. (MRP Page #8, Solids Monitoring) We currently report on the quantity of tomato pomace (dry solids), and wet waste (wet solids) that are generated and disposed of off-site. It is not realistic to report the volume of pond sediments generated each month, because we only ascertain the quantity when we dredge the settling pond annually, prior to tomato season.
Response: The MRP was clarified.

34. (MRP Page #9-10, irrigation cycle average BOD loading rate) We need clarification on the irrigation cycle length. Is it the time from when water started being applied to the time that it fully percolates into the soil, or until the next round of irrigation in that field? Is the "Mx=BOD mass from other sources (e.g. cattle manure) in pounds unit conversion factor" only for external sources or does it apply to the cattle grazing the fields? What is an acceptable estimate for this quantity per Animal Unit Month (AUM)?
Response: This was discussed in detail with the Discharger during a conference call on 16 April 2019; no changes were made to the WDRs based on the discussions.

35. (MRP Page #10, nitrogen loading rate) Is the "Mx=nitrogen mass from other sources (e.g. fertilizer and compost) in pounds per acre" only for external sources or does it also apply to manure from the cattle grazing in the fields:
Response: The nitrogen loading includes manure from cattle.

36. (MRP Page #10, Flow Monitoring) Does the "Total annual flow discharged to LAAs" only pertain to wastewater, or do stormwater and supplemental irrigation water also count against that total?
Response: Flow monitoring is only required when wastewater is discharged to the LAAs, which shall include any other irrigation sources that are commingled with the wastewater. If wastewater is not discharged (only storm water or supplemental irrigation water), flow monitoring is not required.

37. (MRP Page #11, Groundwater Monitoring Sec. 1) SPRRs = Standard Provisions and Reporting Requirements for Waste Discharge Requirements, 1 March 1991ed. The description of items to be included in the narrative description is somewhat vague. Are there further details that might help us determine exactly what information the CVRWQCB wants in this section?
Response: This was discussed in detail with the Discharger during a conference call on 16 April 2019. It was recommended that the Discharger contact Kenny Coyle, their contact for the C/E Unit, prior to drafting the monitoring reports.

38. (MRP Page #11, flow-weighted annual average FDS effluent concentration) Is this value only calculated for wastewater and supplemental irrigation water, or is stormwater also included? Since each source of supplemental irrigation water is to be included, that would seem to indicate that each of those sources would have to be monitored for FDS and flow at some frequency. What are those frequencies and what is considered an acceptable form of flow monitoring equipment?
Response: The calculation shall include FDS data collected when wastewater is discharged to the LAAs.

39. (MRP Page #12, Land Application Area Management Plan) These are the monitoring requirements listed in that plan. They must be included in the annual report.
Response: Clarified with the Discharger during a conference call on 16 April 2019 that monitoring and reporting requirements included the LAA Management Plan are required.

4 Monitoring and Reporting Plan

4.1 Monitoring

Implementation of this plan includes annual water sampling Within tailwater ditches to monitor herbicide levels . Although herbicide will be applied in a manner that avoids transport to surface waters to the greatest extent feasible, there is a potential for herbicide to enter adjacent ditches. Tailwater is redistributed throughout the LAA and therefore, high levels of herbicide within the tailwatermay have a detrimental effect on crop production. In order to evaluatewhether herbicide applicationmay present a risk to crops grown on the LAAs, grab samples will be collected annually within 72 hours of herbicide application from the discharge of each of the four tailwater pumps The tailwater samples will be analyzed for chlorinated herbicides by EPA Method 8151. The laboratory analytical results will be included In annual monitoring reports submitted to the RWQCB .

A record of personnel Inspection dates, findings, and corrective actions will be maintained. The Environmental Supervisor for Campbell Soup is responsible for Inspections and confirming that appropriate corrective actions have been taken and are effective on a quarterly and annual basis.

Contact Information

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4.2 Reporting

Copies of logs and documentation will be maintained on site for three (3) years and available for RWOCB Inspectionif requested.

40. This map shows the route of the Dixon Resource Conservation District drainage ditches around and through the Campbell Soup processing plant and Land Application Area property. The water draining in these ditches is not under our control and is of unknown quality. They drain a large area further to the north and west that is not represented in this map. We include this information, because these ditches flow near several of the monitoring wells and may have an impact on groundwater quality measured, especially in the months when storm drainage is occurring, or irrigation drainage from agricultural lands are occurring.